1. Significant left main coronary artery stenosis. 2. Left main equivalent: significant (70 percent) stenosis of the proximal left anterior descending (LAD) and proximal left circumflex arteries. 3. Three-vessel disease. 4. Two-vessel disease with significant proximal LAD stenosis and either ejection fraction 5. One- or 2-vessel stenosis without significant proximal LAD stenosis, but with a large area of viable myocardium and high-risk criteria on noninvasive testing. 6. Disabling angina despite maximal noninvasive therapy, when surgery can be performed with acceptable risk.